

AVIATION

The Oldest American Aeronautical Magazine

MAY 5, 1924

Issued Weekly

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"Contact!" — The Navy's Longren experimental plane (60 hp. Wright engine) ready to take off

VOLUME
XVI

SPECIAL FEATURES

NUMBER
18

WHERE THE MONEY GOES
PROGRESS OF THE WORLD FLIGHTS
CURTISS CO. OFFERS PLANT TO MCCOOK FIELD
CONGRESSIONAL HEARINGS ON THE AIR SERVICES

GARDNER PUBLISHING CO., INC.
HIGHLAND, N. Y.
225 FOURTH AVENUE, NEW YORK

PUBLISHER'S NEWS LETTER

The completion of the cost to the Government of Aviation toward the interest that we expected—perhaps a little more than we thought possible. We have had two distinct reactions. The first, from people generally, that it was an excellent idea to let the public know how much our Air Service was really costing as it will emphasize the importance of aviation and help show that it should receive much greater study and intelligent consideration than it has been given in the past. The other is from those officials who have been telling the country that airplanes could not be bought in adequate numbers because Congress would not grant sufficient appropriations. They seemed to find that the disclosure of such a large sum might have a tendency to curtail appropriations in the future. We do not share such fears. We do believe, however, that great economy can be effected by consolidation of aeronautic activities and the elimination of duplication.

* * * *

President Coolidge last week in New York made the following very significant statement:

"At present our country does not need a greater outlay of capital, but a greater application of constructive economy."

This feeling applies with especial force to our aviation expenditures. When it is known that the government is paying almost as much for the upkeep of our aerial aircraft carriers as it does for our effort in Air Mail, there ought to be a very favorable reaction in favor of using this practical and public serving ability. Take the pay item alone—\$17,000,000 pay for Army and Navy Air Services—\$1,980,000 for the whole Air Mail without night flying. The pay roll for civilian employees at McCook Field is greater than the entire Air Mail appropriation. Probably the same would be true of the Naval Aircraft Factory. It is just such comparisons as these that will prove helpful in the long run, we believe.

We have never known a line to come from an open discussion of government expenditures. We believe that if our aviation expenditures could be put into budget form, with exact statements of what purposes money is to be spent for, there would soon come about a complete reorganization of aerial activities.

* * * *

Take the figures in round sums. In the last five years since the War the Government has spent, say, \$500,000,000 on aviation. General Patrick gave in the cost of wartime aviation the figure \$382,121,113.50 in an article printed in the February, 1923, issue of *Current History*. The aviators who were supposed to be in charge of this "billion dollar aircraft scandal" have been criticized up and down the land for extravagance and waste. If we have spent more since the War than for the War the question naturally arises: Did we get more during the War for our money than we have for a like sum spent during peace? Such questions deserve a complete answer and we do not doubt that it will be given to Congress and to the public.

* * * *

So much for the story of the cost of Aviation. A number of inquiries have been received about these news letters, some correspondents asking the names of the persons responsible for them so that they could write more personally. Much against our inclination we shall follow the excellent example of our good friends, Mr. C. G. Gray of *The Aeroplane* and add significant items so that the blame and the criticism can be placed on one pair of shoulders. Careful readers usually do not read much easily. Therefore do not wear their products. In the same way, good taste should make those who give publicity to others seek anonymity, but we yield to the request of our friends and will sign these letters henceforth with a simple—L. D. G.

MAY 5, 1934

AVIATION

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Our course includes thorough flying training as well as complete instruction in the care, load, use and maintenance of both the airplane and motor. Every graduate of our school is guaranteed to qualify for a pilot's license. The tuition is \$225 and may be applied on the purchase price of any airplane the student might select.

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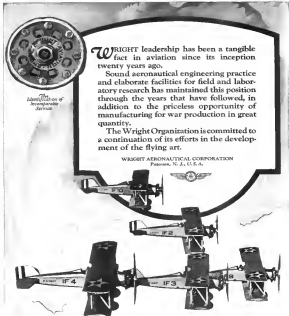
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AVIATION

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Vol. XXVI

MAY 5, 1924

No. 18

Where the Money Goes

THIS week we print the second of a series of articles dealing with the expenditures of the Government for aviation. We do not wish to claim that these articles are complete or exhaustive studies of the subject. But, such as they are, they will give the reader a fairly comprehensive idea of what happens to the money which Congress appropriates each year for the Government Air Service. At the same time, this serial contains enough material to keep a curiosity which, we hope, will make these costs available for work and open discussion.

If the Army Air Service was not so reticent on publishing as "closed magazines," it might be possible for other publications to secure fuller data on this interesting subject.

The latter hint, dated April 28, 1924, bearing the names of General Putnam, General Mitchell and other officers the following dissembling statements are made: "U. S. Air Service" is published for the Association and is maintaining about contact. Our sources of information have advised us fully that it is enabled to publish data not available to the aeronautical publications. If you want to look us up, we are not as a club. We need your word as well as to be in support."

However, the various testimonies before the Appropriations Committee of the House of Representatives disclose sufficient data to show how important a matter the whole question has become.

Anti-Aircraft Propaganda

THIS Coast Artillery Corps have now started to tell the country that it can protect it from aircraft. Until recently the old line Naval officer has been the most partial type of those aircraft. The bombing tests and the experiments of General Moffett have changed this attitude somewhat, so that now it is even admitted that aircraft are a useful "addition" to the fleet.

The Coast Artillery propaganda is shown in the following accounts of a recent Saturday afternoon "demonstration" at New York.

"The thrills of an air attack on actual warfare were experienced yesterday by the crowds which assembled at Fort Totten when the Twenty-second Coast Artillery held the first of a series of four anti-aircraft days. Big guns roared the day over the first few hostile airplanes, and last night the machine-guns played on real airplane targets.

"The previous, starting at 2:20 o'clock, was hardly under way when the thrills began. Out of a clear sky an airplane swooped down over the demonstration field and dropped a bomb on the commanding officer at the fort.

The message was signed by Lieutenant M. L. Elliott, observer and was dated September, L. I. It contained a warn-

ing that a hostile formation of five de Havilland bombing planes was approaching the fort from the northeast, and that at 2:55 P. M. over East Hampton, L. I., the altitude of the formation was 3,000 feet, and the speed eighty miles per hour.

"Immediately the assembly fell was sounded, and the long cannon trums got under way. There was a long rumbly and thundering of tracks and guns as the implements of warfare got into position, with three-inch guns, machine guns, and searchlight batteries, telephones, cables and submersibles worked about the field. Repeating headquarters were established in the headquarters.

"Three from the northeast five bombing planes appeared, which was the signal for action, and the old fort forty rumbled under the heavy fire from the anti-aircraft guns. The planes, repelled by the attack, trailed off eastward, defeated in their object.

"Captain W. M. Gorman, of the Battery-second Artillery, talked on the future development of anti-aircraft material. After showing that it required twenty-four bombing planes to work eight hours to sink the modernized battleships New Jersey and Virginia off Cape Hatteras, Captain Gorman described four new types of anti-aircraft weapons as a process of development."

Still another account went further. It predicted almost complete protection from aircraft.

"Heavy airplanes in the next year will do well to keep out of reach of Uncle Sam's newest arm. The air is going to be untenable for bombing planes flying at an altitude of 10,000 feet or less. Combat and naval machines to keep out of danger will have to climb 30,000 feet."

Such statements should be sent to our Air Service with facts which show the number and cost of anti-aircraft material that would be required to do the things they claim. And then the pretenses of this should be informed. When an "observer" can report to us on anti-aircraft battery the object of a fight, the exact speed at which they will fly and their present altitude then opens hostilities target practice can be regarded as by the Coast Artillery in its heart's content.

A Wonderful Flight

FLYING men all over the world who are following reports of the remarkable progress Lieutenant Pélissier (Phoe), the French "man-of-war" flyer, is making on his proposed flight from France to Japan, will have the deepest admiration not only for the professional skill of the pilot, but also for his great endurance.

The fact that this is a "rough-and-tumble" venture, without any advance preparation, and that it is being undertaken with a stark observation plane of the French army air service, only make the feat the more remarkable.

Where the Money Goes

How \$67,241,327.95 Was Spent in 1922-23 for Government Air Services

Last week *Aviation* printed a summary of the government expenditures for the Air Service during the fiscal year 1922-23, making a total of \$67,241,327.95. Of this sum \$34,750,867.81 was spent for Naval Aviation, with several more million dollars for aircraft carriers and naval aviation in the Coast Guard. The remaining \$32,490,460.14 was spent for the Army and the National Advisory Commission for Aeronautics. The figures were taken from the report of the Engineering Division of the War Department. It is difficult to get the costs of particular operations as they are not given in detail, but it is hoped that a discussion of some of the items will lead to further expansion, so that the whole subject of costs may be studied with greater ease.

The Cost of Helium

Almost as interesting as the aid to the Government of its Air Service are the items entered through the Treasury on the subject of helium.

Approximately \$10,000,000 has up to now been invested in helium plants in the Government. The actual cost of this gas per thousand cubic feet varies from \$50 to \$150. This does not take into account any depreciation at interest.

There have been about \$900,000 in cost of helium gas produced each year. Likewise 100 tons per day for production and a great deal for storage. In the case of the Navy, in commercial operations, a ton of \$5,500,000 would have to be added to the cost of \$600,000 in it of helium produced each year, or about 25 tons a cubic foot or \$250 a thousand cubic feet. About \$600,000 was spent for the production of helium in the plants making the operating cost about 20 cents a cubic foot or \$100 a thousand cubic feet. Using this basis of figures, which is not the Government's method but a conservative one, it is seen that, in actual use, the helium now produced would cost on a commercial basis about \$300 a thousand cubic feet. As a commercial company would probably claim that the Government's methods were not those of a commercial company, it is believed that the cost of helium would not be below at one-half the \$300 per thousand cubic feet or 150 per thousand cubic feet. This is allowing only 100 per cent for overhead, which is extremely conservative.

Admiral Moffett has said many times that the Navy's interest in helium is much more to determine the commercial possibilities of helium, a most interesting series of experiments is being made.

The Standard Oil Company requires roughly 2,100,000 cu ft of helium. At \$175 per thousand cubic feet it costs therefore \$367,500 to fill the gas in its engine.

Secretary Weeks is said at the hearing that on the trip to St. Louis, during which the Standard Oil firm \$300,000 was lost, there was a loss of 15 per cent of helium through leaking. This would amount to a loss of \$45,000 worth of helium on the trip, or at the rate of about \$5 per mile.

These figures have been developed to open up the question of the commercial possibility of using helium in airplanes. The cost of helium, according to General Patrick, is \$7.50 a thousand cubic feet as compared to \$175 for helium on a commercial basis. Another interesting fact brought out at the hearing is that the supply of natural gas from which helium is being extracted will probably be exhausted in twenty years.

It is apparent then, that there is a problem for the Army and Navy, and possibly for industries, as well as for the Government, in a manner that will convert the above statements. It is hoped for the sake of helium that it may be done.

McCook Field

The expense of the Engineering Division of the Air Service

has always been the most downed item of all Air Service expenditures.

The annual appropriations for McCook Field here have been as follows:

1918-1919	\$5,714,315.00
1919-1920	5,000,000.00
1920-1921	5,000,000.00
1921-1922	5,000,000.00
1922-1923	5,000,000.00
1923-1924	5,000,000.00
Total for 6 years	\$29,714,315.00

At McCook Field there are 1607 civilian employees. Their rate of pay is as follows:

1 Legal Advisor	\$5,750.00
1 Chief Accountant	5,250.00
1 Accountant	5,000.00
2 Accountant-Deputies	4,500.00
2 Mechanical Engineers	4,000.00
1 Packing Expert	3,500.00
1 Legal Assistant	3,200.00
1 Accountant-Engineer	3,000.00
1 Mechanic	2,500.00
1 Physician	2,500.00
1 Chief Accountant	2,500.00
1 Drafting Superintendent	2,500.00
1 General Foreman	2,500.00
2 Production Foremen	2,500.00
2 Patent Experts	2,500.00
1 Purchasing Agent	2,500.00
1 Mechanic	2,500.00
20 Assistants	\$3,000 to \$3,500.00
17 Clerks, stenographers, etc.	\$2,500 to \$3,000.00
122 laborers	\$2,000 to \$2,500.00
132 laborers	\$2,000 to \$2,500.00
164 laborers	\$1,500 and \$2,000.00
274 laborers	\$1,500 and \$2,000.00

General Patrick stated that mechanics were paid the same wages as for paid for the same class of labor in Dayton.

The pay roll totals about \$5,000,000 a year.

As has been shown previously for 1919-20, General Patrick asked for \$2,500,000 for the pay of civilian employees and deposits. The number of such employees in 1922-23 was 1,607. At \$3.00 an hour they are \$4,821,000. At \$3.50 an hour they are \$5,685,000. At \$4.00 an hour they are \$6,550,000. At \$4.50 an hour they are \$7,415,000. At \$5.00 an hour they are \$8,280,000. At \$5.50 an hour they are \$9,145,000. At \$6.00 an hour they are \$10,010,000. At \$6.50 an hour they are \$10,875,000. At \$7.00 an hour they are \$11,740,000. At \$7.50 an hour they are \$12,605,000. At \$8.00 an hour they are \$13,470,000. At \$8.50 an hour they are \$14,335,000. At \$9.00 an hour they are \$15,200,000. At \$9.50 an hour they are \$16,065,000. At \$10.00 an hour they are \$16,930,000. At \$10.50 an hour they are \$17,795,000. At \$11.00 an hour they are \$18,660,000. At \$11.50 an hour they are \$19,525,000. At \$12.00 an hour they are \$20,390,000. At \$12.50 an hour they are \$21,255,000. At \$13.00 an hour they are \$22,120,000. At \$13.50 an hour they are \$22,985,000. At \$14.00 an hour they are \$23,850,000. At \$14.50 an hour they are \$24,715,000. At \$15.00 an hour they are \$25,580,000. At \$15.50 an hour they are \$26,445,000. At \$16.00 an hour they are \$27,310,000. At \$16.50 an hour they are \$28,175,000. At \$17.00 an hour they are \$29,040,000. At \$17.50 an hour they are \$29,905,000. At \$18.00 an hour they are \$30,770,000. At \$18.50 an hour they are \$31,635,000. At \$19.00 an hour they are \$32,500,000. At \$19.50 an hour they are \$33,365,000. At \$20.00 an hour they are \$34,230,000. At \$20.50 an hour they are \$35,095,000. At \$21.00 an hour they are \$35,960,000. At \$21.50 an hour they are \$36,825,000. At \$22.00 an hour they are \$37,690,000. At \$22.50 an hour they are \$38,555,000. At \$23.00 an hour they are \$39,420,000. At \$23.50 an hour they are \$40,285,000. At \$24.00 an hour they are \$41,150,000. At \$24.50 an hour they are \$42,015,000. At \$25.00 an hour they are \$42,880,000. At \$25.50 an hour they are \$43,745,000. At \$26.00 an hour they are \$44,610,000. At \$26.50 an hour they are \$45,475,000. At \$27.00 an hour they are \$46,340,000. At \$27.50 an hour they are \$47,205,000. At \$28.00 an hour they are \$48,070,000. At \$28.50 an hour they are \$48,935,000. At \$29.00 an hour they are \$49,800,000. At \$29.50 an hour they are \$50,665,000. At \$30.00 an hour they are \$51,530,000. At \$30.50 an hour they are \$52,395,000. At \$31.00 an hour they are \$53,260,000. At \$31.50 an hour they are \$54,125,000. At \$32.00 an hour they are \$54,990,000. At \$32.50 an hour they are \$55,855,000. At \$33.00 an hour they are \$56,720,000. At \$33.50 an hour they are \$57,585,000. At \$34.00 an hour they are \$58,450,000. At \$34.50 an hour they are \$59,315,000. At \$35.00 an hour they are \$60,180,000. At \$35.50 an hour they are \$61,045,000. At \$36.00 an hour they are \$61,910,000. At \$36.50 an hour they are \$62,775,000. At \$37.00 an hour they are \$63,640,000. At \$37.50 an hour they are \$64,505,000. At \$38.00 an hour they are \$65,370,000. At \$38.50 an hour they are \$66,235,000. At \$39.00 an hour they are \$67,100,000. At \$39.50 an hour they are \$67,965,000. At \$40.00 an hour they are \$68,830,000. At \$40.50 an hour they are \$69,695,000. At \$41.00 an hour they are \$70,560,000. At \$41.50 an hour they are \$71,425,000. At \$42.00 an hour they are \$72,290,000. At \$42.50 an hour they are \$73,155,000. At \$43.00 an hour they are \$74,020,000. At \$43.50 an hour they are \$74,885,000. At \$44.00 an hour they are \$75,750,000. At \$44.50 an hour they are \$76,615,000. At \$45.00 an hour they are \$77,480,000. At \$45.50 an hour they are \$78,345,000. At \$46.00 an hour they are \$79,210,000. At \$46.50 an hour they are \$80,075,000. At \$47.00 an hour they are \$80,940,000. At \$47.50 an hour they are \$81,805,000. At \$48.00 an hour they are \$82,670,000. At \$48.50 an hour they are \$83,535,000. At \$49.00 an hour they are \$84,400,000. At \$49.50 an hour they are \$85,265,000. At \$50.00 an hour they are \$86,130,000. At \$50.50 an hour they are \$86,995,000. At \$51.00 an hour they are \$87,860,000. At \$51.50 an hour they are \$88,725,000. At \$52.00 an hour they are \$89,590,000. At \$52.50 an hour they are \$90,455,000. At \$53.00 an hour they are \$91,320,000. At \$53.50 an hour they are \$92,185,000. At \$54.00 an hour they are \$93,050,000. At \$54.50 an hour they are \$93,915,000. At \$55.00 an hour they are \$94,780,000. At \$55.50 an hour they are \$95,645,000. At \$56.00 an hour they are \$96,510,000. At \$56.50 an hour they are \$97,375,000. At \$57.00 an hour they are \$98,240,000. At \$57.50 an hour they are \$99,105,000. At \$58.00 an hour they are \$99,970,000. At \$58.50 an hour they are \$100,835,000. At \$59.00 an hour they are \$101,700,000. At \$59.50 an hour they are \$102,565,000. At \$60.00 an hour they are \$103,430,000. At \$60.50 an hour they are \$104,295,000. At \$61.00 an hour they are \$105,160,000. At \$61.50 an hour they are \$106,025,000. At \$62.00 an hour they are \$106,890,000. At \$62.50 an hour they are \$107,755,000. At \$63.00 an hour they are \$108,620,000. At \$63.50 an hour they are \$109,485,000. At \$64.00 an hour they are \$110,350,000. At \$64.50 an hour they are \$111,215,000. At \$65.00 an hour they are \$112,080,000. At \$65.50 an hour they are \$112,945,000. At \$66.00 an hour they are \$113,810,000. At \$66.50 an hour they are \$114,675,000. At \$67.00 an hour they are \$115,540,000. At \$67.50 an hour they are \$116,405,000. At \$68.00 an hour they are \$117,270,000. At \$68.50 an hour they are \$118,135,000. At \$69.00 an hour they are \$119,000,000. At \$69.50 an hour they are \$119,865,000. At \$70.00 an hour they are \$120,730,000. At \$70.50 an hour they are \$121,595,000. At \$71.00 an hour they are \$122,460,000. At \$71.50 an hour they are \$123,325,000. At \$72.00 an hour they are \$124,190,000. At \$72.50 an hour they are \$125,055,000. At \$73.00 an hour they are \$125,920,000. At \$73.50 an hour they are \$126,785,000. At \$74.00 an hour they are \$127,650,000. At \$74.50 an hour they are \$128,515,000. At \$75.00 an hour they are \$129,380,000. At \$75.50 an hour they are \$130,245,000. At \$76.00 an hour they are \$131,110,000. At \$76.50 an hour they are \$131,975,000. At \$77.00 an hour they are \$132,840,000. At \$77.50 an hour they are \$133,705,000. At \$78.00 an hour they are \$134,570,000. At \$78.50 an hour they are \$135,435,000. At \$79.00 an hour they are \$136,300,000. At \$79.50 an hour they are \$137,165,000. At \$80.00 an hour they are \$138,030,000. At \$80.50 an hour they are \$138,895,000. At \$81.00 an hour they are \$139,760,000. At \$81.50 an hour they are \$140,625,000. At \$82.00 an hour they are \$141,490,000. At \$82.50 an hour they are \$142,355,000. At \$83.00 an hour they are \$143,220,000. At \$83.50 an hour they are \$144,085,000. At \$84.00 an hour they are \$144,950,000. At \$84.50 an hour they are \$145,815,000. At \$85.00 an hour they are \$146,680,000. At \$85.50 an hour they are \$147,545,000. At \$86.00 an hour they are \$148,410,000. At \$86.50 an hour they are \$149,275,000. At \$87.00 an hour they are \$150,140,000. At \$87.50 an hour they are \$151,005,000. At \$88.00 an hour they are \$151,870,000. At \$88.50 an hour they are \$152,735,000. At \$89.00 an hour they are \$153,600,000. At \$89.50 an hour they are \$154,465,000. At \$90.00 an hour they are \$155,330,000. At \$90.50 an hour they are \$156,195,000. At \$91.00 an hour they are \$157,060,000. At \$91.50 an hour they are \$157,925,000. At \$92.00 an hour they are \$158,790,000. At \$92.50 an hour they are \$159,655,000. At \$93.00 an hour they are \$160,520,000. At \$93.50 an hour they are \$161,385,000. At \$94.00 an hour they are \$162,250,000. At \$94.50 an hour they are \$163,115,000. At \$95.00 an hour they are \$163,980,000. At \$95.50 an hour they are \$164,845,000. At \$96.00 an hour they are \$165,710,000. At \$96.50 an hour they are \$166,575,000. At \$97.00 an hour they are \$167,440,000. At \$97.50 an hour they are \$168,305,000. At \$98.00 an hour they are \$169,170,000. At \$98.50 an hour they are \$170,035,000. At \$99.00 an hour they are \$170,900,000. At \$99.50 an hour they are \$171,765,000. At \$100.00 an hour they are \$172,630,000. At \$100.50 an hour they are \$173,495,000. At \$101.00 an hour they are \$174,360,000. At \$101.50 an hour they are \$175,225,000. At \$102.00 an hour they are \$176,090,000. At \$102.50 an hour they are \$176,955,000. At \$103.00 an hour they are \$177,820,000. At \$103.50 an hour they are \$178,685,000. At \$104.00 an hour they are \$179,550,000. At \$104.50 an hour they are \$180,415,000. At \$105.00 an hour they are \$181,280,000. At \$105.50 an hour they are \$182,145,000. At \$106.00 an hour they are \$183,010,000. At \$106.50 an hour they are \$183,875,000. At \$107.00 an hour they are \$184,740,000. At \$107.50 an hour they are \$185,605,000. At \$108.00 an hour they are \$186,470,000. At \$108.50 an hour they are \$187,335,000. At \$109.00 an hour they are \$188,200,000. At \$109.50 an hour they are \$189,065,000. At \$110.00 an hour they are \$189,930,000. At \$110.50 an hour they are \$190,795,000. At \$111.00 an hour they are \$191,660,000. At \$111.50 an hour they are \$192,525,000. At \$112.00 an hour they are \$193,390,000. At \$112.50 an hour they are \$194,255,000. At \$113.00 an hour they are \$195,120,000. At \$113.50 an hour they are \$195,985,000. At \$114.00 an hour they are \$196,850,000. At \$114.50 an hour they are \$197,715,000. At \$115.00 an hour they are \$198,580,000. At \$115.50 an hour they are \$199,445,000. 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Curtiss Co. Offers Plant for McCook Field

Garden City Factory Ideal For Engineering Division of Air Service

For \$100,000 in cash over and above the mortgages the Government now holds on the Garden plant, the Air Service can secure the entire manufacturing and engineering equipment of the Curtiss Aeroplane & Motor Co. located at Garden City, Long Island. That there will be a very serious consideration of this offer by the War Department goes without saying. Compared with the necessity of spending \$5,000,000 to erect McCook Field in another city, an air base that has another water facilities, not to be granted, there can be little

"Our plant was built in 1917 by our subsidiary company, the Curtiss Engineering Corporation, which was organized specifically to do the research and machine work of the Curtiss organization. It is a very complete plant and includes within its aerodynamical laboratories having one of the largest wind tunnels in the world, physical laboratories, chemical laboratories and motor laboratories, as well as a complete machine tooling equipment for the construction of practically any element necessary to aircraft development. The equipment of



Airplane view of the plant and flying field of the Curtiss Aeroplane & Motor Co., Inc., at Garden City, Long Island

question that Congress will either all the find need in the country, and given it thought to the new proposal before it reaches the government to the expenditure of large sums in another government air station. This offer was made to the Secretary of War by the Curtiss Aeroplane & Motor Co. on March 3, 1924, in the following letter:

Terms of the Offer

"In the annual report of the Chief of the Air Service for the fiscal year ending June 30, 1923, on page 12 he states in one of his recommendations that—'The land offered the United States Government by the owners of Dayton is suitable for flying purposes and should be accepted.' He also recommends that the War Department be authorized of \$5,000,000 to the United States for the erection of a building program on that property, which would ultimately cost \$5,000,000. This land could be used for the experimental and engineering work of the Air Service.

"When he made this recommendation he did not know that the manufacturing laboratories and construction plant owned by our corporation at Garden City were available for this purpose. It is our endeavor it is more desirable for this experimental work than the present McCook Field or than the new property near Dayton.

"Our corporation now offers to sell to the War Department the land and plant at Garden City, with its entire equipment, including flight lines of ground as well as its standard, for the sum of \$1,000,000.00 complete, free and clear of all mortgages.

The plant itself is housing in many of four subdivisions. It has adequate space for drafting rooms and for airplane construction, and it has a few office buildings.

"The plant has been erected within the last few years at all the high speed airplanes for both the Army and the Navy, which now hold the world's records, as well as outstanding types of military and naval aircraft for service use.

"The plant is splendidly located for the purpose. It is directly adjacent McCook Field, which is owned by the War Department and which is in service use as a flying field, fully equipped with quarters for officers and men. It is within fifty feet of the New York coast and has developed in this locality a corps of highly trained aircraft engineers and workers. It is the center of the flying activities of the East.

"Our million dollars was the cost of the plant to our subsidiary company, and we are prepared to sell it to the War Department for the same sum, free and clear of all mortgages. In the event that this offer is acceptable to you we are willing to have you deduct from the purchasing price the five and several mortgages now held by the United States against our property owned by this company. These mortgages aggregate \$600,000.00 and will be due in 1928.

"Therefore, for a total cash expenditure of \$145,000.00 the War Department can secure a house for the Engineering Division of the Air Service, ideally located and available for immediate occupancy.

"We continue to contrast this proposition with the one proposed in the volume of Dayton, which involves a great appropriation of \$5,000,000.00, which is merely an avowed

May 4, 1924

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and contemplated expenditure of \$5,000,000.00. One has the advantage of being a completed going proposition which could be used within a very short period of time by the Air Service, whereas there would inevitably be delays and even variation in the experimental division's work while it is waiting for the new plant to be prepared for use.

With one proposition but one appropriation will be necessary. Apparently it would be necessary for the Congress to appropriate a million dollars each year for the next five years to complete the new Dayton plant, which when finished would not be superior to our plant, unless the War Department is preparing to go into the manufacture of aircraft on a production basis.

"We therefore call your attention to the fact that even since the war there has been a very distinct demand of space for an extension to the advantage of Dayton as a location for the engineering laboratories of the Air Service. Its great distance from the center of flying operations and from the most important elements of the industry has handicapped its progress. We believe that a majority of the members of the Air Service would be in favor of locating these experimental laboratories at some more convenient place than Dayton.

"If the offer is accepted the Company will continue to do whatever experimental work is necessary in its buildings located on the Curtiss flying field which adjoins McCook Field in Garden City, and would transfer its aircraft engine work to a Buffalo plant which is already equipped to handle it. Its Buffalo plant is adequate to meet the demands for engine production both in airplanes and motors for some years to come, so we can not judge what the quantities of our work will be.

"After your consideration we are handing you herewith a complete table of the engineering plant at Garden City, as well as a similar table covering our equipment at Buffalo. On this date the Congressional Committee which is now studying the Dayton proposition will be in possession of all the facts concerning the air station arrangement, which we propose, and which we earnestly believe to be a great advantage to the Government."

The matter is now being studied by the War Department.



Wind tunnel at the Curtiss plant in Garden City

with a view to reaching a tentative decision. Then the matter will be submitted to the Congressional Committee that will have to pass on the appropriation for a new site for the Engineering Division.

Advantages of the Offer

The material advantages that would result from having the Engineering Division of the Air Service at Garden City—situated apart from the financial work of the proposition—will be indicated by the following considerations:

1. The plant is within five hours' train time from Washington, or two hours by airplane, which would permit the maintenance of a much closer liaison between the Engineering Division and the Chief of the Air Service.
2. The plant is near the material markets of New York City, where all the necessary raw materials, instruments, guns, ammunition, material and less, can be quickly procured.
3. The plant has been long established on that there is available a large number of highly trained mechanics.
4. It is near McCook Field, a large flying station now owned by the Government, which would greatly accommodate all engineering flying activities as well as the flying which is now being carried out at the Field. McCook Field is connected with the plant by a little over one-half mile of well paved road.
5. It is believed that considerably more work of an engineering and flying nature could be accomplished in the vicinity of Garden City, due to the rubber plants and the greater number of good flying days during the winter months.

The Curtiss Company's Garden City property occupies an area of 20 acres which affords ample room for any expansion in the way of testing equipment or buildings that the Air Service might require for some years to come. The buildings are all of a construction which permits easy expansion. The buildings now located on the property are of a substantial nature constructed of steel and white-painted brick, and the floor plan and general arrangement of buildings seems to be ideally suited for the Air Service's engineering requirements.

The ground floor, engineering department and drafting rooms open in about equal to that now at McCook Field. The power house has ample capacity for heating and for use for power for activity that might be carried on and is sufficient for the operation of the complete plant at capacity. The wind tunnel building and physical testing laboratories are the most modern type and the wind tunnel, which is in con-



Aerodynamic balance of the Curtiss wind tunnel at Garden City

In the near future plans of the Aerodrome Squadron, Aviation Plant, near the Caribbean, will undertake a preliminary survey of Balisade Bay, on the southern coast of Cuba. This work is designed to lead to the development of a deep water channel at Balisade City, which will then be in a position to act as a shipping port for products of the life of France and the adjacent interior of Cuba. At present it is necessary to transport the products of the life of France to Havana for further shipment, and, similarly, it has also been necessary

to ship the products of the part of Cuba near Balisade to Havana by rail. The development of a deep water channel at Balisade will reduce the time and cost of transportation of the products from the above sources and will do much to relieve congestion at Havana.

The use of airplanes to make a photographic survey, according to the Navy hydrographers in charge of the work, will make possible in the course of a few days a survey that would take six months by means of surface craft alone.

If you are one of the companies in your state having first class facilities for passenger carrying, sight seeing and several others, you should be represented at WHEELS TO PLY next week.

RATES ON APPLICATION

AIR ALBERT

LEARN ON AYRD AND DHD.
The AYRD is fast enough to see you safely down in 10 sec. The DHD is safe to use on all roads and rails.
THE CHAMBERLIN AIRCRAFT CO.
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You receive individual instruction to learn to land, take off, and make several other maneuvers.
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NEW YORK & NEW JERSEY
CURTIS FIELD, GARDEN CITY, LONG ISLAND
SUNNYSIDE FIELD, BUFFALO, N. Y.
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CURTIS AIRPLANE & MOTOR CO., INC.

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Curtis Exhibition Company, Garden City, N. Y.
Flying instruction in 15, 18, 20, 25, 30, 35, 40, 45, 50, 55, 60, 65, 70, 75, 80, 85, 90, 95, 100, 110, 120, 130, 140, 150, 160, 170, 180, 190, 200, 210, 220, 230, 240, 250, 260, 270, 280, 290, 300, 310, 320, 330, 340, 350, 360, 370, 380, 390, 400, 410, 420, 430, 440, 450, 460, 470, 480, 490, 500, 510, 520, 530, 540, 550, 560, 570, 580, 590, 600, 610, 620, 630, 640, 650, 660, 670, 680, 690, 700, 710, 720, 730, 740, 750, 760, 770, 780, 790, 800, 810, 820, 830, 840, 850, 860, 870, 880, 890, 900, 910, 920, 930, 940, 950, 960, 970, 980, 990, 1000, 1010, 1020, 1030, 1040, 1050, 1060, 1070, 1080, 1090, 1100, 1110, 1120, 1130, 1140, 1150, 1160, 1170, 1180, 1190, 1200, 1210, 1220, 1230, 1240, 1250, 1260, 1270, 1280, 1290, 1300, 1310, 1320, 1330, 1340, 1350, 1360, 1370, 1380, 1390, 1400, 1410, 1420, 1430, 1440, 1450, 1460, 1470, 1480, 1490, 1500, 1510, 1520, 1530, 1540, 1550, 1560, 1570, 1580, 1590, 1600, 1610, 1620, 1630, 1640, 1650, 1660, 1670, 1680, 1690, 1700, 1710, 1720, 1730, 1740, 1750, 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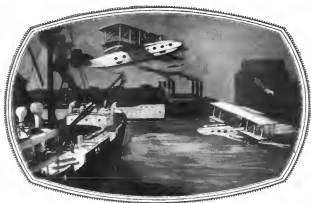
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